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Improving quality

Common sense in environmental impact assessment: it is not as common as it should be

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Reviews of environmental impact assessment (EIA) practice, particularly by industrial proponents, have highlighted common shortfalls. EIA would benefit from more 'common sense', which is not very common. For example, issue scoping usually includes too many inconsequential factors, and issues not directly affecting project decisions. Consideration of significance is often vague, misleading or inconsistent. Quality of environmental impact statements (EISs) leaves much to be desired, with EIS documents of little use to stakeholders. EIA guidance is a possible solution but is not always focused or applied sensibly. While we suggest more effective signals from government EIA regulators to project proponents to overcome these difficulties, our primary intention is to evoke discussion and provoke practitioners to take up the fight to improve the quality and integrity of EIAs.

Keywords: EIA practice, improvements, common sense, EIA quality, effectiveness

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THE BASIC PRINCIPLES of environmental impact assessment (EIA) for projects[1] are well established in the extensive body of literature that has grown up over the past 30 years (for instance, Petts, 1999). Despite the ready availability of good guidance on how to undertake effective EIA, many elements of practice still remain sub-standard in our view. This is disappointing to say the least. EIA is not 'rocket science' and most of the problems can be solved simply through the application of a good dose of common sense to the process. Although there are many others we could have chosen to include, in this paper we focus on three key areas that we find particularly irksome with regard to their treatment in practice:

- issue scoping;
- determination of significance; and
- quality of environmental impact statements (EISs).

We also present some suggestions as to how to reinsert common sense in dealing with these issues and thus improve EIA practice. The main tools we recommend are more effective signals from government EIA regulators to project proponents, greater ownership of the EIA process by proponents and, with reservations, the provision and application of EIA guidance.

These three topics are closely related in that they concern the key inputs to EIA that occur early in the process and set the direction that an EIA will take. We reason that, if an EIA starts off on a good footing using a common-sense approach, the latter parts of the process are likely to be undertaken well too.

It is not our intention to undertake an extensive review of the available literature on these topics, but rather to draw more on our own personal experiences (that is, a common-sense approach) supplemented with examples from our own involvement in EIA practice. In presenting examples, we have not cited the offending documents or practitioners; it is not our intention to single out individuals because the problems appear to be widespread and systemic.

We explore each of the three areas in terms of the faults we see, the reasons why these faults are contrary to common sense and ways to improve these practices by using common sense. We conclude with some key recommendations and a challenge to practitioners to take a zero-tolerance approach to inadequate and mediocre EIA practice.

Best practice EIA principles

Numerous books, articles and reports have been published that promote good or best practices in EIA; there are too many to attempt to include them all here. In brief though, basic principles for effective EIA are summarised in Sadler (1996: 22–23), IAIA & IEA (1999) and Wood (2003: 12), while books such as Wathern (1988), Canter (1996), Morgan (1998) and Petts (1999) provide detailed chapters on individual stages and aspects of the EIA process and its range of applications.

Additionally, numerous useful articles on all aspects of EIA appear in earlier issues of this journal. It is not our intention to duplicate this work. However, a brief summary of salient principles from relevant literature for the three elements of EIA practice focused on in this paper serve to introduce discussion in each of the following sections.

Issue scoping

Scoping has been defined as "the process of identifying and assigning priority to the issues associated with a [project]" for the purposes of focusing the impact assessment for the project (Ross, 1987). It commences once it has been determined that a proposal should be subject to assessment but (ideally) before EIS preparation by the proponent. Scoping occurs principally during determination of the terms of reference (ToR) for an EIS. Excellent guides to the principles of scoping can be found in Beanlands (1988), Environment Canada and the Federal Environmental Assessment and Review Office (1993), Sadler (1996: 55) and Jones (1999).

The key purpose of scoping is to focus on what matters to decision-makers when determining whether or not to approve a proposal (Kennedy and Ross, 1992). The common sense of this is that, if an impact will not influence the project decision, it is not appropriate to require that it be studied in an EIA designed to improve project decision-making.

Scoping is a process of adding and removing issues from a list to be considered in the assessment (Kennedy and Ross, 1992). Issues are initially added to the EIA process for consideration when they are proposed or identified early in the scoping process (for instance, during screening and initial consideration of a proposal and its environmental setting).

During this initial risk anticipatory phase, EIA practitioners from proponent and regulatory organisations alike should add issues perceived likely to have a significant effect on the environment to the EIA process for further consideration. The public also has an important role here when terms of reference for EISs are prepared.

Removing issues from the list occurs subsequently, when it is determined that they are not that important. This may be when significant adverse effects are determined to be unlikely (for instance, investigations such as baseline studies, impact prediction, project siting, or mitigation design eliminate issues from further consideration in the EIA process). That is, the impacts are found not to be significant for the purposes of project decision-making.

While the principles of scoping are straightforward and imply that EIA should follow an ordered and focused approach, practice often falls short of this. The tendency is for consultees to request, and for published guidance or terms of reference to require, proponents to deal with 'everything under the sun'. For instance, in Canada it is rare that regulators limit the EIA ToR.

One of us (Ross) participated in a review on behalf of an industry proponent. At a preliminary meeting involving the EIA consultant, he (Ross) suggested that the draft EIA ToR[2] were all-inclusive and thus of no value. The consultant responded that he had tried submitting a focused ToR but the government always responded by issuing final ToR that were all inclusive; so trying to focus ToRs was counterproductive.

Currently, there is a major proposal for a 1220 km natural gas pipeline in northern Canada. The EIA was developed in response to a ToR that was 77 pages in length. Discussions with both the proponent and a person associated with the joint review panel suggest that this ToR was somewhat more focused than normal in Canada.

The result (so far) is a 6000-page EIS followed by about 700 information requests from participants in the review process. Whether the EIS could have been more focused given a less inclusive ToR is not the issue. The problem is that the proponent was almost certainly required to deal with more issues than are likely to influence the final project decision.

The problem seems to be that regulators are unwilling to be decisive on what matters are to be addressed through EIA. Often scoping processes are open to public input, as they should be for effective scoping. For instance, in Alberta, Canada, the draft ToR must be made available for public review and,

indeed, the proponent is required to consult with affected public in preparing them.

Similarly, for the highest level of assessment used in Western Australia, known as an environmental review and management programme, the proponent is required to prepare an environmental scoping document setting out the environmental factors raised by the proposal and the proponent's intended studies, which may be made available for a two-week public comment period (*Government Gazette*, 2002: s5.5.2).

In the UK, the proponent is required to go through a formal scoping programme consulting predetermined statutory bodies for their opinions and issues. It is rare now for these programmes not to include a wide range of key stakeholder organisations, affected parties and the general public.

Active participation of the public is an important principle for best practice EIA (IAIA & IEA 1999) and we certainly insist on its inclusion in effective scoping processes. However, there is a tendency for participants in a review process to view their concerns as most important, even when they may not be perceived as terribly important by others, especially by decision-makers. This is true, in our experience, among both public and government participants.

This is why good scoping involves setting priorities and decision-makers have an obligation to reject some concerns before setting EIA terms of reference. Scoping should identify information and concerns pertinent to the subsequent tiers of impact assessment; it is ineffective when it just records opinions. Failure to reject issues that will not influence the project decision results in the proponent spending time and resources on unimportant issues, resources that should be redirected to issues that truly matter.

Worse still, other participants will see the results of this work in the EIS and spend their resources reviewing it and commenting on it, falsely thinking they are contributing to effective decision-making, when in fact they are wasting their time and energy. The result is huge EISs and wasted time and costs for proponents, regulators and the public alike. Common sense says that scoping should ensure that only issues important for proposal decision-making are addressed in EIA.

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Determining significance

As was made clear in the discussion on scoping, the intention in EIA is to focus on the likely significant effects of a proposal on the environment. One of the objectives of EIA is to (IAIA and IEA 1999: s2.2):

> anticipate and avoid, minimize or offset the adverse *significant* biophysical, social and other relevant effects of development proposals (emphasis added).

Numerous guides to the determination of significance have been produced, several of which are summarised in Sippe (1999). He notes that the determination of significance occurs throughout the EIA process (notification or referral, screening, scoping, EIS preparation, public review of the EIS, regulator evaluation of EIS and proposal, public evaluation of the project, project decision-making, and follow-up) and is undertaken by different stakeholders at different stages.[3] Our chief concern relates to the determination of significance early in the EIA process as this affects how the EIA subsequently proceeds.

Screening is meant to determine whether or not a proposal is likely to have a significant effect on the environment, thereby triggering the need for an EIA. For those projects found to necessitate an EIA, scoping is intended to focus the assessment (and initially the EIS) on significant impacts and issues. The idea in EIS preparation is to define the anticipated significant impacts (those identified through the scoping process), indicate whether they are positive or negative, and determine their significance.

The criteria for significance are expected to be explicitly documented in the EIS (UNEP, 1987). The proponent is expected to explain clearly the criteria the EIA process has used to determine significance — an explanation that must be intellectually sound.[4] Then, using these criteria, the EIS should explain why impacts are or are not significant, substantiated by the work carried out during the EIA.

Clearly, this is common sense. How else can decision-makers, or any participants in the review, understand the EIS conclusions? In practice, however, the criteria are often poorly explained, contradictory or there is insufficient assessment to determine what is significant. Several problems commonly emerge.

First, the term 'significance' is used in different contexts. In addition to the traditional meaning in impact assessment (importance for decision-making), the term can be used to imply perception of significance or 'issue attention' (Downs, 1972), statistical significance (very likely to be a real effect

based on a statistical test) or ecological significance (important to maintain an ecosystem). These different meanings are too often used in EISs (and subsequently in follow up studies: when one sees a reference to an impact that is not statistically significant being referred to as an "insignificant impact", one worries whether this is confusion or deception). This lack of common sense in terminology causes much confusion. Whether a proposal is likely to have a significant effect on the environment in the context of the entire suite of issues may be different from whether a particular impact is significant.

Also, certain issues or components of the environment (for instance, the presence of a keystone species) might be considered to be significant but of little relevance to the anticipated impacts of the proposed development. Often the different meanings of the word significant are used indiscriminately in EIA documents and may also be inter-mixed with words with similar meaning such as 'important', 'critical' and 'focal'.

For example, in the referral documents submitted recently by the proponent of a mining proposal under the federal Australian EIA system, the word significant was used in several different ways as the following extracts highlight. In the section in which the proponent was required to describe the nature and extent of likely impacts, it was stated that:

> It is estimated that the number of plants that may be disturbed by mining is a significant percentage of the populations of the … two [listed endangered] species in the … area. These populations fulfil the criteria of "important populations". Management measures would be implemented to ensure that there is no significant impact to the overall conservation status of these threatened species.

Further on, where the proponent was required to provide a description of important features of the project area, it was stated that:

> Flora surveys undertaken in the general area in the last seven years have identified that the … [areas within the vicinity of the mine site] region have significant conservation values and several taxa of rare or significant flora.

Finally, in the concluding section of the referral, in which the proponent is expected to indicate whether or not the proposal warrants EIA, it was stated that:

> Based on the proposed conservation management it is considered that the proposed action does not represented a significant impact to the … [listed endangered] populations encompassed by the proposed action.

Phrases such as 'significant percentage' and 'significant flora' have particular meanings in terms of statistical analysis and nature conservation respectively. When these are mixed up with other uses of the word as an adjective, along with similar terms such as 'important', things can become very confusing. We suggest that the term is both over-used and used in non-specific or confusing ways.

A second issue concerns whether a significant impact can be suitably mitigated. This addresses the notion of 'residual impact', the impact post-mitigation or post-development. Certainly, residual impact is what a decision-maker should properly consider when deciding on project approval. However, the decision-maker must also consider the likelihood and factors that ensure that the mitigation measure proposed will work effectively (Marshall, 2001).

If the mitigation measure is well known to be effective, the decision-maker must only ensure that it is implemented correctly and included as a condition of project approval. If it is uncertain whether the mitigation measure is effective (a knowledge gap we would presume had been clearly identified in the EIS), then the decision-maker must set out, through EIA follow-up studies, a means to verify effectiveness and require suitable contingency plans or management alternatives to be put in place should the proposed mitigation measure not prove effective.

The moral obligation on the proponent and the EIA consultant in such a case is to state clearly in the EIS that the project would cause significant adverse impacts without the mitigation measure but that the proposed mitigation measure would reduce the impact to an acceptable level. This must also be accompanied by a note of the uncertainty of mitigation measure effectiveness. This is the sort of flag that should alert the decision-maker to a necessary condition of approval and the need for a follow-up study.

A third problem with significance is when there is a mismatch between the method claimed to be used to determine significance and the actual presentation of results in an EIS. For example, it is common in Canada to find EISs indicating that significance is determined by some complex system such as that shown in Table 1.

The problem is that, on reading the content of the EIS, the real criteria are not these at all, but, for

Table 1. Significance of impact

No impact	Impacts that do not occur
Negligible impact	Impacts that are not discernible above background
Minor impact	Impacts low in severity, short- or medium-term in duration and restricted to the (local or regional) study area
Moderate impact	Impacts that are medium in severity, or short-, medium- or long-term in duration and do not extend beyond the regional study area
Major impact	Medium or high impacts that are long-term in duration and/or extend beyond the regional study area

example, meeting (or failing to meet) local ambient air-quality or water-quality objectives. Why would the author of an EIS not specify what was used to determine significance? We think the EIS consultant has 'boiler plate' material (such as Table 1) that is automatically inserted into the EIS to meet the requirement to explain criteria for significance. Then the consultant ignores these stated criteria, doing what it wants later on. This hardly helps a reviewer to understand, and have confidence in, the results of an EIS. The only people who appear to benefit from such EISs are lawyers who can earn a small fortune arguing the semantics of what is significant and what is not at public hearings.

Another problem that follows on from the previous point is that often an entirely subjective approach to significance is used. An important procedural component in any EIA is to ensure that the reporting of significance criteria follows a standardised approach across all environmental parameters, a template that is easily understood by stakeholders and decision-makers. It is rare that proponents explicitly define the measure by which significance is judged in an EIS. There is a real risk in this circumstance for every impact to be significant (in the sense that it is included in an EIS, therefore it is implicit that it must be significant) or for none of the impacts to be distinguished as significant (because the proponent makes no attempt to determine the significance of individual impacts). Either way, a poor or meaningless EIS results.

A final problem with significance concerns the communication of the concept. Why does every EIS lie? In our experience, although it is inevitable that any form of development that triggers the necessity for an EIA is likely to have a significant effect on the environment, not all such effects are wholly mitigatable and manageable. Therefore the conclusion of every EIS that seems to state that: "There are no significant effects from this proposal …" needs to be challenged. Such claims of insignificance not only defy common sense, but are also insulting and pathetic.

Rather than attempt to create a 'smokescreen' that there is no risk to the environment by including such a lame conclusion, surely it would give proponents more credibility to acknowledge openly the significant (adverse) effects of their proposals and at the same time build a credible assurance of their ability to manage the consequences satisfactorily through appropriate siting, environmental design and mitigation.

Common sense demands that:

- the screening and scoping process establishes which impacts are considered to be significant for the purpose of an EIA;
- the method for determining significance is articulated clearly and early on in the EIS and this guide is followed later in the EIS; and
- careful distinction is made in using the term significance (in the context of the proposal, a particular element of the environment, or in terms of relative importance of predicted effects) throughout the EIS and other steps in the EIA process.

Common sense demands that: the screening and scoping process establishes which impacts are considered significant; the method for determining significance is articulated clearly; and careful distinction is made in using the term significance

Quality of environmental impact statements

One of the most frequent criticisms of EIA practice over the last 30 years concerns the quality of EISs. Various studies have focused on different aspects of EISs, such as their scientific basis (for instance, Beanlands and Duinker, 1983), the quality and accuracy of impact predictions (for instance, Culhane *et al*, 1987), communication and presentation issues (Bendix, 1984) and methods for reviewing and rating the quality of EIS (for instance, Lee and Colley, 1990).

The principle for preparing an EIS is simple; it should present a clear, concise summary of the likely environmental impacts, the proposed mitigation measures, the significance of the residual impacts and suggestions for needed follow-up studies. The proponent[5] is thus required to produce a formal record of the environmental information used to make these evaluations.

Common sense dictates that this process should be succinct, transparent and focused. Unfortunately however, this rarely seems to be delivered in practice. To meet the scoping needs of regulators (as discussed previously), EISs are often unduly long and unfocused. Furthermore, the scientific integrity of analysis is often poor. All too often, the result is EISs that are long and tedious compendiums of disjointed facts and figures backed up by spurious claims.

This makes life difficult for participants in the review process, both government and communities, to assess environmental risk objectively. It also increases the time required for regulators to determine what is important or relevant to proposal decision-making. Indeed, among the three of us, we have reviewed many EISs and have determined that it is much easier to review a good EIS than to review a poor one.

Tongues in cheek we have attempted to classify ten types[6] of problematic EIS that the world would be better off without (Table 2). Unfortunately, we continue to encounter them on a daily basis in our work. An example mentioned earlier was the 6,000 page EIS for the Canadian gas pipeline, which is clearly an 'everything under the sun' EIS.

Table 2. Types of EIS we wish to never see again!

Type	Defining characteristics
Paymaster's EIS	An EIS that reflects a 'done deal'; that is, the EIS simply justifies the pre-selected design and its parameters. There is no sensitivity to the local environment and, where impacts are identified, they are dismissed or glossed over.
Art lover's EIS	Full of lovely pictures, detailed baseline attached to pretty maps, but no serious attempt at objective impact evaluation; a calligraphic demonstration of art over science
Technophile EIS	Full of engineering drawings, detailed engineering parameters, usually a 70-page noise, air-dispersion and odour report, little on the environment, and completely unreadable except to those with a PhD in chemical engineering or fluid dynamics (and who enjoy wearing a white coat whilst holding a clipboard).
My first EIS	An EIS written by the unlucky recent graduate who has been thrown in at the deep end as the consultancy has a rush of work on. The EIS is wordy, unstructured and full of statements that point to a mild sense of panic in the young author's cerebellum. The real problem here is the lack of direction provided to the new hire.
The plural EIS	The EIS written by committee, each person writing his/her own section without direction and regardless of the findings of other environmental colleagues. The introduction to such an EIS is usually perfunctory, as is the consultation and methodology chapters, as each individual knows that it is their own contribution which is the heart of the EIS.
The 'millionth monkey' EIS	Written by the millionth monkey on the typewriter; such an EIS is badly structured, poorly comprehended, grammatically frightening and inclusive of slang. Sentences usually require at least 50 words and a minimum of punctuation. This EIS provides conclusive proof to research anthropologists that scientists cannot write to save their lives.
Hamster bedding EIS	One in which the overall performance is so poor that this is the only practical use that a statutory consultee could effectively make of the document. We submit a five-page EIS for an asbestos landfill and a 25-page EIS for an incinerator that did not once mention the environment for consideration under this heading.
'Fact or feely-fact' EIS	'Why bother with science when you can make assumptions or unverified predictions' are the hallmark of this EIS. Combining science with urban myth, guesswork with abstract references from other EIS documents, this EIS commonly makes a wide variety of unsubstantiated statements regarding the effectiveness of mitigation, the behaviour of species and the ability of the environment to conduct self-remediation.
Everything under the sun EIS	Multiple volume EISs that are measured in metres of bookshelf space they occupy. Why bother communicating clearly, when you can obfuscate with a 5,000-page EIS? They address every impact imaginable that might be associated with the project and a lot more besides.
The 'pocket atlas' EIS	These EISs are written in the developing world by western consultants for industry and the more obscure development agencies. They are usually based on a one-day visit to the closest international airport and an EIA built up from schoolboy textbooks, old Hollywood films and a manual on '1000 interesting things to know about the rain forest'. They are notable for the fact they always confirm the original project proposal.

Most regulators have limited time to wade through the multiple volumes submitted by the proponent and to understand the complexities of the project. The immediate response of stakeholders we spoke to was that they would seek out only those sections of direct relevance to their role in the EIA process. Common sense says that this is poor EIA practice: after all, who is going to look at the big picture, the overall context of the project?

We believe decision-makers would benefit most from seeing the entire picture. Poorly written EISs do not lend themselves to this. Discussions with the proponent of the gas pipeline project led us to believe that they are merely trying to respond to the extensive terms of reference. Blame here does not rest with the proponent alone.

Improving the quality of inadequate EISs, whether they are too small, too large, unreadable, or contain inappropriate content, requires action from proponents, the public and (especially) from EIA consultants and regulators. Proponents and EIA consultants are responsible for producing the documents in the first place. The consultants especially should be focused on continuous internal improvement in how they conduct and communicate EIA through the EIS. The public has a right to clear, objective, concise and easily readable EISs if it is ultimately to be satisfied with the process. Government regulators have a major role in improving the scoping process by requiring appropriately focused EISs.

Perhaps most importantly, regulators should reject inadequate EISs, requiring proponents to rewrite prior to proceeding to review the project. For example, in section 98(2) of the Australian *Environment Protection and Biodiversity Conservation Act* 1999 (Cth) an EIS can only be approved for publication if the Minister is satisfied that it adequately addresses guidelines for the document previously issued by the Minister.

Unfortunately, in our experience, few, if any, EISs are sent back for the proponent to improve prior to public release. The common sense here is simply that one cannot decide on a project for which the supporting environmental documentation (the EIS) is inadequate. It is also essential that good EISs be rewarded through expedient assessment by regulators, thereby decreasing the time taken for EIA overall. It is

important that we 'lift the bar' concerning the quality (and size) of EISs expected. This is best done by rejecting poor EISs and rewarding good ones.

Conclusion

Common sense is what you revert to when all other avenues have been explored! (Anon)

We have identified three aspects of EIA to which more common sense ought to be devoted if EIA is to improve significantly. These three aspects, scoping, determination of significance and quality of EISs, are interrelated. We have also suggested means by which these difficulties could be overcome. There is no single party to blame for the deficiencies in EIA practice that we have; they should be described, perhaps, as a cumulative laxity in our professionalism. The responsibility for the problems and their solutions is shared amongst proponents, regulators, consultants and public stakeholders alike. Everyone has a responsibility to use more common sense in EIA!

We believe there are real opportunities for government regulators to provide more focused direction through effective scoping and for articulating the significance of impacts in EISs. To achieve this, they may have to put concepts of process aside and concentrate on the delivery of EIA as an effective environmental risk management tool. Morrison-Saunders *et al* (2001) observe that the single most important source of pressure to produce a good EIS is from regulators.

One obvious means of dealing with the need for improved scoping and determination of significance is the issuance of EIA guidance documents. Wood (1999) stated that guidance was a valuable aid, not only for those responsible for preparing EIA reports, but also to those reviewing and making decisions. EIA guidance materials are normally prepared by regulators to urge proponents to incorporate environmental issues and considerations into the design stages of a project. This is intended to increase certainty and reduce delays for proponents in achieving project approval (Waldeck *et al*, 2003). By being aware of EIA requirements and expectations to be met in advance, they can design their projects and prepare EISs accordingly. In this context, EIA guidance explains the 'rules' or sets the 'goalposts' for proponents to aim for.

However, we are reluctant to promote this approach without first mentioning some limitations on the use of EIA guidance documents. While provision of some guidance in EIA is clearly a good thing, in practice there is a real danger that too much guidance is prepared or that it is not well used. An evaluation of the opinions of consultants confronted by guidance documents in Western Australia found that greater industry consultation was needed in the formulation of the guidance (Waldeck *et al*, 2003). We strongly support this conclusion.

Waldeck *et al* (2003) also made other observations concerning the need for care to be exercised in developing EIA guidance. Overall this study found that consultants considered the guidance to be beneficial, but there is a clear message that a balance has to be struck between guidance and hindrance.

There are real opportunities for government regulators to improve the quality of EISs by rejecting poor ones and rewarding good ones. More generally, it is time for all EIA practitioners, organisations and professional bodies to 'raise the bar' with respect to EIA practice and to demand better quality assessments. It is not difficult; the application of common sense is what is needed.

We have identified a number of areas in which application of common sense could greatly improve EIA practice. We have focused on the early stages of the process on the basis that improvement here is likely to lead to better outcomes in the later stages. Specifically, we recommend that practitioners take a zero tolerance approach to poor quality EIAs and demand the following:

- scoping and terms of reference for EISs that focus attention on significant environmental issues only. Regulators need to be clear here and firm with spurious or ambit claims from public opposition groups;
- clear and consistent methods for articulating the significance of impacts in EISs; and
- focused, objective and scientifically robust EIS.

EIA has been viewed as a "highly successful policy instrument" (Sadler, 1996: 24). It is a process that enables environmental outcomes to be properly accounted for before decisions are made and actions are undertaken. Importantly, it also facilitates informed participation by the community in decision-making processes that affect it. At its best it is a logical, pragmatic and 'fit-for-purpose' process.

Common sense demands that we follow it rationally. Furthermore, we do not have to overly complicate EIA — a good dose of common sense in EIA can go a long way towards meeting all demands. Practitioners and regulators have been complacent for too long in tolerating mediocre and inferior EIAs. Let us engage more common sense when we engage in EIA; together, we can make a difference!

Notes

1. Our focus is on EIA for projects, not on strategic environmental assessments, which are carried out for policies, programmes and plans.
2. In this jurisdiction (province of Alberta), the proponent is responsible for submitting draft terms of reference for the EIA. The Alberta Government subsequently issues the final terms of reference.
3. While this is true, for our purposes, determination of significance of impacts at the project approval stage is the responsibility of the regulatory decision-maker. Others may offer advice concerning significance but the regulator and no others must make the final decision.
4. Note that 'significance' involves human or anthropocentric

values in an important way. Scientific studies are important to determine significance but values are at least as important.
5. In almost all EIA processes, it is the proponent who is responsible for preparing the EIS.
6. These EIS types are not exclusive. Some EISs exhibit many of these characteristics.

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On common sense and environmental impact assessment

Luis E Sánchez

Among theoretical conceptualizations, mathematical modeling and other advanced tools that often characterize papers published in scholarly and professional journals, Ross, Morrison-Saunders and Marshall call us down to Earth warning: "many elements of [EIA] practice remain sub-standard". This does not come from any possible lack of standards. In the mid-1990s, there was some discussion about the possible advantages of an ISO 14000-style international standard for environmental impact assessment (for instance, sessions in the International Association for Impact Assessment (IAIA) Estoril meeting in 1996). Although the idea did not prosper under this format, environmental impact assessment (EIA) professionals

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do share a reasonable corpus of reference materials that conform to what could easily be called standard practice.

Such a corpus includes IAIA best practice principles, international principles for social impact assessment, the United Nations Environment Program training manual, several textbooks, and many guidelines and regulations issued by government bodies and international organizations. All this is subject to continuous revision by internationally-minded EIA professionals and academics, but to what extent is this corpus shared with (or even understood by) local EIA practitioners, project proponents and affected and interested parties?

In most countries, the average EIA professional, be he or she a consultant, a government official or other, is unaware of such a standard. His or her major (or only) reference is local or national law or regulation. Most practitioners are not scholars or research-oriented experts; they are simply technicians that, quite often, learned by practice or took short-term basic training courses. Moreover, many experts involved in environmental impact statement (EIS) preparation are commissioned to develop a small part of the text, to undertake a survey or to compile existing information in their field of expertise and do not know how their contribution fits into the overall picture.

The feeling of widespread substandard practice is not confined to EIS preparation. I often hear bitter comments or candid assertions about "How is it possible that this company has been ISO 14001 certified?" or "How the hell did the auditor accept this?".

Substandard practice exists in any professional field. If it appears to be extensive or widespread in EIA, I suggest a combination of two specific broad reasons as a possible explanation. The first arises from the very purpose of EIA, to anticipate the significant consequences of a proposed development. Good practice (and indeed the law) establishes that an EIS should be prepared in cases where significant impacts can be expected.

These projects are generally controversial, raising opposing viewpoints because of conflicting interests or values. Although EIA is about rational decision-making, environmental conflicts can easily become emotional issues. As such, EIA literature has always assigned a non-negligible role to value judgment. Considering that impact significance depends on values, perspectives, and interests (including vested interests), how is common sense to be exerted in an emotional and controversial context?

The EIA professional should fight to place him or herself above conflicts of interest and contribute to finding a solution acceptable to all or most parties involved. Admittedly, this is no easy task for someone with an engineering or hard science background. To make things more complicated, scientists often disagree on the very same controversial issues that concern ordinary citizens. Hence, it appears that common sense is the last resort in some quarrels.

Supposedly, guidance and recommended standard practice could only help. Nevertheless, a number of conflicts result from deficient communication, including poorly written EISs; but no guidance can overcome the paucity of clear ideas in the minds of some EIS writers: it is a truism to say that cloudy ideas can only lead to unclear texts flying over the skies of EIA.

Then we come to the second major reason that could explain the prevalent shortage of common sense: poor comprehension of the purpose and usefulness of the EIA process. If the main (or only) reference and guidance for a practitioner is the law, and if the law states that an EIS is required to obtain a permit (as it does in most places), than there is a tremendous risk that the EIA process is reduced to EIS preparation. Therefore, for our narrow-minded professional, the role of EIA in project planning, alternative selection, public involvement, and adaptive environmental management becomes next to non-existent.

The scoping of issues to be dealt with in the EIS is particularly prone to the claws of the mediocre professional and to a restrictive (mis)interpretation of many regulations. It seems that unwritten advice dominates: better to treat many topics with equal superficiality than to study in depth a few significant issues. As pointed out by Ross, Morrison-Saunders and Marshall, this is a "particularly irksome" area, where, despite all available guidance, practice is substandard.

Guidance is not enough, but is necessary. After all, we have to agree with French writer and Nobel Prize winner André Gide (with apologies for the liberal and free translation): all things have already been said, but as nobody listens, it is necessary to restate over and over again. International guidance and good practice advice needs to be tirelessly disseminated, especially among key actors in governments, namely EIA process managers.

Not surprisingly, Ross, Morrison-Saunders and Marshall focused their thoughts on three out of four "priorities for improvement" selected by Sadler (1996): scoping, evaluation of impact significance and review of EIA quality, leaving monitoring and follow-up for further discussion. Almost ten years after this international study on the effectiveness of environmental assessment, many fundamental flaws remain unresolved.

If common sense is a recommended mitigation measure for substandard EIA practice, and considering that it could hardly be taught in schools or universities, or promoted through training courses, how should a 'common sense action plan' be implemented? This, in fact, is a question in need of answers.

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Common sense in environmental impact assessment — it cannot be avoided

Joe Weston

It is always a little worrying when someone calls for a 'common sense' approach to anything. A few years ago, the British Conservative Party were calling for a 'common sense revolution', something they dropped, quite sensibly, when they could not agree on what that meant. Not many years ago, it was 'common sense' that a woman's place was in the home, and, in Germany in the 1930s, Hitler's views were seen as 'common sense' by a large number of the German population. Something that makes 'common sense' is invariably something that is perceived to be universally true by certain people but that always falls well short on close critical examination.

In the social sciences, another term for common sense is social paradigm, an underlying belief system that helps both to order and explain society. It is extremely interesting, and telling, when proponents of environmental impact assessment (EIA) claim that their view of the process is common sense because EIA has its roots in the rationalist paradigm of the 1950s and 1960s (Benson, 2003). Indeed the rationalist paradigm was the common sense for a long period of time and many elements of it remain in place today. Gamble (1981) argued that much of the construction of modern society was based on the lending of authority to rational knowledge and the very project of modernity was to give value to "only those things counted as knowledge which could be shown to be rational …" (Gamble, 1981: 107).

The use of experts in EIA to carry out objective, scientific, systematic assessments to aid decision-making was intended to provide legitimacy to decisions in the era of this rationalist paradigm (see Weston, 2000). Critics of rationalism have always argued that the rationalist paradigm was always little more than an apology for capitalism and a smokescreen to legitimise decisions that would have been taken anyway. The use of rationalist techniques and the claim that a decision is rational and common sense is an attempt to stifle discussion and to convert essentially political debate into technical decisions (Boehmer-Christiansen, 1994)

After all, there is no alternative to a rational decision — it is only common sense. In this way, rationalism is seen as failing to provide objective decisions as it is inherently itself value-based (Smith and May, 1997: 165). Today, according to Beck (1992; 1995), we have a new common sense paradigm that rejects rationalist notions and is characterised by a mistrust of politicians, science, technology and experts (see Weston, 2004).

For those who accept the Beck view, we have changed as a society and therefore there is a new common sense that makes it difficult, if not impossible, for there to be an objective common sense understanding of what significance means in EIA. It is this new risk society paradigm that explains the irksome problems identified by William Ross *et al*. The view offered in this response to them is that, while society may have changed and become less willing to accept what science, experts and technology has to offer, the real problem has been that EIA, as with rationalism itself, has always been based on subjective value judgements.

Concept of significance in EIA

It is worth asking at this point how many articles need to be written on the subject of significance in EIA until we all get it — 'significance' in EIA is a wholly subjective concept (see for example, Beanlands and Duinker, 1984; Beattie, 1995; Fortlage, 1990; Thompson, 1988). Ross *et al* seem to reject this and demand that significance be based on a rational systematic common sense process.

The starting point for understanding the true nature of significance in EIA requires the acceptance of a non-rational perspective that states that no decision in respect of the environment, including screening and scoping decisions in EIA, can be objectively stated as being right or wrong. This is because the environment is experienced and valued subjectively. It is not possible to force someone to care about the future survival of the lesser-spotted flat-eared thing if they genuinely do not care, and no objective judgements can be made about that person's right not to care.

The opposite is also true. To people who hold particular views on the environment and the significance or otherwise of particular environmental features, those views make perfect common sense. What right has an 'expert' to come in and say the impact of a project on the lesser-spotted flat-eared thing is not significant — that does not make common sense.

The point is, when we consider the notion of significance in EIA, we do so from a particular perspective and that perspective is our common sense view and we find the contrary opinion of others to be

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nonsensical and irrational. Furthermore, the planning system in the UK, where EIA is mostly located, has built in protection for the decision-maker to make subjective value judgements.

Significance in the system

The UK's planning system is highly legalistic and adversarial. Because of the UK's semantic and literalistic legal culture, and the long developed system of court-made law through precedent, the planning system has largely developed, and been shaped by, court rulings that result from legal challenges to individual planning decisions.

Furthermore, the number of judicial challenges to planning decisions has been growing steadily over recent years and is set to rise further once the concept of standing is widened as a result of the Aarhus Convention. This growth may be part of the 'risk society' phenomenon or simple NIMBYism (not in my backyard), but the result is that planning decision-makers are often now more focused on avoiding a legal challenge than they are on the quality of the decisions they make. The importance of this cannot be overstated as the system of judicial review of planning decisions has become an increasingly important part of the development of EIA in the UK and has fundamentally shaped its operation (see Weston, 2002).

Under the UK's planning system, where most of EIA takes place, there has always been an acceptance that subjective value judgements cannot be objectively tested. Indeed, it is enshrined in planning law that the discretionary — subjective — element of a decision cannot be challenged in law. The courts have, over the years, consistently held that it is not their role to interfere with a local planning authority's consideration of the planning merits of a case (see Bell and McGillivary, 2000: 73–82).

This principle has been extended in the last ten years to the screening decisions made by local authorities when considering whether an EIA is required for a particular project. The courts can only intervene when a decision-making body fails to follow the correct procedures, that is, fails to complete a screening process for projects covered by the EIA Regulations.

Under UK EIA law, the test for the legality of a screening decision is not how or why significance was determined in a particular case, it is that the same decision would have probably been arrived at by any other 'reasonable' decision-maker having taken all the same relevant information into consideration. So, while screening decisions cannot be based on a perverse or unreasonable consideration of the likely impacts of a project, the decision-maker retains the discretionary right to determine, based largely on subjectively valued criteria, whether the impacts are likely to be significant.

Understanding the balance between the discretionary element of a decision and the procedural element is fundamental to understanding how EIA operates in the UK. As decision-makers actively try to avoid having a decision challenged in the courts, they ensure, as far as possible, that the procedural elements of a decision are followed to the letter. In arriving at the discretionary element, all that needs to be done to avoid a legal challenge is to demonstrate that all relevant matters were taken into account before the decision was made. After that, they can make a value judgement on which are the most important and then make the reasonable subjective decision.

The legal duty imposed on-decision makers is to take matters into account before arriving at their decision and then "[l]egally an authority may conscientiously have 'regard to' something, and conscientiously put it in the waste paper bin" (Carnwarth, 1991). As the concept of significance in EIA is inherently subjective, the decision-maker is safe from legal challenge in deciding whether a project should be subject to EIA and what the scope of the EIA should be.

The result of all this is that EIA in the UK has become a procedure to be followed rather than the proactive environmental management tool it was once considered to be. It is largely irrelevant what the common sense view of impacts would be, or even what the environmental statement has to say about those impacts. The solutions to the messy subjective and "irksome problems" of EIA proposed by Ross *et al* simply will not work. As in most of UK administrative processes, in EIA, it is more important to follow the letter of the law than the spirit of the law.

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'Common sense' means different things to different people

Elvis Au

The paper by Ross *et al* argues that environmental impact assessment (EIA) would benefit from more 'common sense' to be applied in issues of scoping, consideration of significance and quality of environmental impact statements (EISs). I would like to comment and respond from the perspective of the Hong Kong Special Administrative Region.

The paper approaches the environmental impact assessment (EIA) process from a practical perspective and rightly points out that "EIA is not 'rocket science' and most of the problems can be solved simply through the application of a good dose of common sense to the process". It also vividly brings out the perspective of industrial proponents and some of their experiences during the EIA process. Such perspectives and experiences should not be treated lightly. As in other countries, project proponents in Hong Kong are some of the key stakeholders of EIA. Any application of the EIA process could not be successful without the support and understanding of the proponents. Areas for improvement should be taken seriously and there must be continuous development of the EIA system.

What I consider lacking in the paper is a proper elaboration of what 'common sense' means as referred to by the authors, and how different stakeholders might have very different and equally legitimate and valid perspectives or notions of common sense on the same issue or problem.

The EIA process in Hong Kong is a multi-stakeholder process and is influenced by the values, beliefs and mindsets of individuals or organisations that participate in the EIA process. In a pluralistic society like Hong Kong, there are bound to be different perspectives on different issues, and it is not uncommon for different groups of stakeholders to have their own notions of common sense. At times, there might be conflict among stakeholders with respect to these views, and it is one of the purposes of the EIA process to resolve such different notions of common sense through a systematic, transparent and scientific process.

Let us take the example of scoping. The paper appears to state the issue in a rather simplistic manner. It refers to scoping as "adding and removing issues from a list of issues to be considered in assessment". For major development projects in Hong Kong, the issues are often complex and multi-faceted. In many cases, the question is not a matter of whether common sense is exercised, but on what basis and from what perspective. It also relates to who makes the judgments, and how such common sense judgments take into account the views, perspectives and priorities of other stakeholders in a reasonable, objective and fair manner.

Similar considerations should apply to the question of significance of environmental impacts. Many cases in Hong Kong confirmed that what might be regarded as insignificant to proponents could well be quite significant to those who might be adversely affected by proposed developments or to the environment in the longer term. The question would then boil down to how judgment on significance would be made in the context of diverse opinions or different values assigned by different stakeholders to different environmental attributes.

The paper does not give any explicit treatment of the role the public play in the decision-making process, especially on issues of scoping and impact significance, and how different stakeholders should interact to foster better common sense among themselves. In Hong Kong, public participation plays an important role in decision-making before, during or after the EIA process. For instance, the Advisory Council on the Environment comprises stakeholders from different walks of life. This provides a very important forum for different stakeholders to exchange views and perspectives regarding their judgment on issue scoping and impact significance, thus greatly facilitating the emergence of consensus on some difficult and controversial issues.

With regard to the question of the quality of EISs, I would certainly agree that sub-standard EISs should be rejected. That is certainly common sense.

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However, what is even more common sense is related to the very purpose of the EISs, namely communicating the findings to the decision-makers, the public and other stakeholders for better understanding and better decision-making. That is, I believe, where many EISs fall short. The statements, and the way practitioners present the findings, are, in my view, actually making it rather difficult for lay decision-makers and lay persons to understand the issues and apply them to their decision-making process. There were complaints in Hong Kong from lay persons that the EIA reports are difficult to read and understand.

Experiences with public participation in the EIA process in Hong Kong have pointed to the need to avoid over-reliance on traditional ways of communication, using textual or written information, and to move towards more innovative methods, such as multi-media, interactive, digital and three-dimensional visualisation technologies for communicating information and influencing decisions and behaviour.

A pilot 3-D EIA public engagement tool has been set up in Hong Kong to enable lay persons to understand complex issues and technical information more easily and to empower lay persons to be truly engaged in a more meaningful manner. It is only through more innovative ways of communication, empowerment and engagement that stakeholders can appreciate the EISs, and achieve the original purpose of undertaking an EIA. This is another type of common sense approach to EIA that could be of great potential and value

There is certainly a need for more common sense to explore more perspectives and achieve the original purpose of EIA founded 30 years ago. In that regard, the paper has achieved its purpose of provoking discussion on this subject.

Solutions to environmental impact assessment failure require more than common sense

Richard K Morgan

It is not hard to detect three tongues firmly implanted into cheeks in a number of places in this think-piece, and yes, I loved the table of types of EISs we would much prefer not to encounter again. Overall, a nice provocative and entertaining paper: thanks chaps.

Now, let us get down to some real thinking. "EIA is not 'rocket science' and most of the problems can be solved simply through the application of a good dose of common sense to the process." Well, that takes care of the textbook I wrote a few years ago (and kindly referenced by the authors!) dealing with environmental impact assessment (EIA) from a methodological viewpoint. Clearly, I was mistaken: it just needs a couple of pages to outline the main steps, then we leave it to innate common sense to supply the rest!

Indeed, one of my early contacts with Drs Wood and Lee at Manchester was when I conducted a brief survey of EIA training in New Zealand, to provide some wider international background to a study they were carrying out for the European Community (as it then was) in the early 1980s. I found that the New Zealand Forest Service expected their staff to study forestry for several years before being let loose on planting and growing pine trees, but felt those same staff could learn how to do EIA by just going out and doing it. They must have been from the same common sense school!

Perhaps I am over-reacting! I agree with the basic tenor of Ross, Morrison-Saunders and Marshall: many of the same long-standing problems with EIAs that have been the subject of comment for the last 35 years are still being experienced. Where I part company is the diagnosis, and how to achieve real improvement. That really comes down to the model of impact assessment an individual has in their head, and how it can be shaped effectively through training.

Yes, EIA is a simple idea (anticipate the likely implications, especially the indirect ones, before committing to a course of action) but it is still devilishly hard to implement effectively. The reasons are not hard to see: we introduce a complex set of actions into a complex environment, especially if we have human-activity systems interacting with natural-environmental systems. We then ask people to predict how their multilayered activities will ripple through the 'environment' and cause changes that people may be concerned about.

Our tools are often much simpler than the real

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world we are trying to investigate, and then we require the information quickly so that decision-makers can consider a proposal. The bigger the project proposal, the more demanding the task. We then put this into a political and legal setting that makes proponents very wary of being found wanting, especially by public challenge.

There are many reasons for EIA systems failing to perform and we need to keep focusing on all areas of the process (from technical methods through to institutional context, and so on) to identify the key barriers to good practice and to address each in turn in an appropriate way. I am not sure that an appeal to common sense does justice to the complex problems that often underpin the symptomatic issues of poor practice.

Let us turn to scoping, the purpose of which, apparently, is "to focus on what matters to decision-makers when determining whether or not to approve a proposal". Oops. That effectively relegates EIA to a technocratic process: proponent technocrat talking to decision-maker technocrat. Where is the role of scoping to allow communities and individuals to have input into, and gain from, the EIA process? Sure, they do get a brief mention later, as having a role when the terms of reference are prepared, but that still comes across as a technocratic model of EIA.

The whole treatment of scoping as presented in the paper is as a technical, issue-filtering process: by way of contrast, social scoping, to use the phrase coined by Beanlands and Duinker (1983), is not well represented. I teach scoping as a complex process, combining technical and social scoping, with changing responsibilities through the process, which leads from broad, initial impact identification through to a focused agenda for the impact assessment.

Ask students without an EIA background to carry out scoping of a project and they typically brainstorm the activity and list a whole series of issues. They would call that the common sense approach, until the disadvantages are pointed out and the benefits of a structured, phased scoping process are explained. It may not be rocket science, but it is not always obvious how to do it well; without training, people will keep brainstorming — frightening to think about.

While I too have concerns about the way significance is addressed in impact assessments, I found the treatment of this issue not very coherent, and rather technical; nothing in this discussion really addressed significance in the sense of establishing social values. Personally, I like the simple typology suggested by Canter and Canty (1993) which identifies the three sources of significance, to paraphrase, as being: codified significance (statutes, plans, and so on); technical significance (expert judgement of the implications for change on the continued operation of a given system); and community significance (what do local people actually think about a possible change, what values do they invest in a particular part of the environment?).

An approach that draws on these sources in a way that is relevant to the given context can be used at any stage in the EIA process when we are concerned with social acceptability of potential impacts. The approach described by Ross et al suggests that significance criteria should be established at one point early in the EIA and then applied later in the process when needed. This seems to deny the dynamic, iterative nature of impact assessment, which sees issues changing, and people's value preferences varying, depending on the apparent degree of threat to their interests, and the options available for other courses of action. As with scoping, parties to the EIA process need to see the subtleties of significance evaluation and to have simple strategies suggested for dealing with significance in a meaningful way.

I fully agree with the sentiments in the paper regarding quality of impact assessments: "It is important that we 'lift the bar' concerning quality … of EISs expected. This is best done by rejecting poor EISs and rewarding good ones". Many of the issues raised can be traced back to the institutional requirements of a given system: until we have administrators of impact assessment processes who actually understand what EIA is for, how it should operate for maximum effectiveness for all users of the process, and how institutional arrangements can subvert the search for effective implementation, we will not see the necessary improvements. That means improved capacity development among established bureaucrats, and better training of new staff, be they lawyers, planners or scientists.

Allied with this is the use of consistent methods for assessing adequacy of impact assessment documents; much work has been carried out on this in the UK, parts of Europe, and a little in New Zealand. A key issue is to make such tools available to the public, to stakeholder groups, and to the proponent (or their consultants).

In short, I see the answers partly in terms of better understanding of the complex set of factors that lies behind poor practice, which often needs good research (how many countries support targeted research into their impact assessment processes?), and partly in terms of better education and training, of all the 'actors' in the impact assessment process, including community groups, but especially the impact assessment consultants. Perhaps the time is right for thinking about certification for impact assessment professionals.

Common sense is fine when we are trying to fine tune processes. When the process is seriously off-key, more fundamental adjustments are needed; time for the impact assessment tuning fork I think!

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What is common sense in the first world may not be common sense in the third world

Richard Fuggle

While I concur entirely with Ross *et al*'s views that many elements of environmental assessment practice are sub-standard and that the quality and integrity of environmental impact statements (EISs) needs to be improved, I find myself unsympathetic to their theoretical analysis of the problem and their practical proposals to improve matters. I suspect that this is partly because my experience of environmental impact assessment (EIA) has been in developing countries and the authors' experience (judging by their affiliations and the examples used in the paper) is based on Canadian, Australian and United Kingdom practice. It is also because of the authors' assumptions that the role of EIA is simply to improve project decision-making and that government regulators have the largest role to play in improving the practice of impact assessment. Neither of these assumptions is, in my experience, valid in developing countries.

Theoretical model assumed

The discourse in Ross *et al*'s article establishes that it is conceptually based on the modernist information processing model of decision-making. This model holds that environmental impact assessments are tools for processing information so that an apolitical regulator can make an informed decision. (In countries where regulatory officials owe their positions to political patronage the notion of apolitical regulators is not common sense.)

In their theoretical analysis of EIAs as decision tools, based on six different models of decision-making, Bartlett and Kurian (1999) note that the assumption that better information will lead to better decisions is contrary to the findings of much social science research: better information only occasionally produces better decisions. I have recorded elsewhere (Fuggle, 2004) how, in a developing country, political expediency can completely override and negate the information contained in environmental impact assessments.

The concept of EIA as a tool for processing information before subsequent regulatory decision-making does not adequately recognise the iterative nature and political context of decision-making. It does not recognise that EIA is as much a political as a technical device, and that it plays an important role, particularly in developing countries, in empowering the marginalised and providing a framework through which they are drawn into the planning process.

EIA creates the political space for a process of mutual adjustment between proponents of a project and those who will be affected by it — the process is as important as the product. In developing countries, EIA has many more actors in the drama than proponent, regulator and EIA practitioner; it is not common sense that: "… only issues important for proposal decision-making [should be] addressed in EIA". In developing countries, the negotiations that occur among stakeholders as the EIA process unfolds, and the amendments to proposals that result, are every bit as important as the information content of the environmental impact statement.

Practical proposals

Although Ross *et al* attribute deficiencies in EIA practice to "cumulative laxity in our professionalism" the solutions they suggest focus entirely on one group of practitioners — government regulators. In countries where EIA practitioners start their careers in consultancy and progress to regulatory roles after they have gained practical experience, this might be common sense. However, in situations where newly fledged EIA practitioners start out in regulatory roles and then progress to private consultancies (which is common in developing countries) it is not common sense to look to the regulatory authorities to rectify cumulative laxity in professionalism.

In all the developing countries with which I am familiar, the bulk of professional experience and intellectual rigour to guide and rectify professional laxity resides outside government bureaucracy. The challenge in developing countries is not for regulators to provide the EIA profession with more guidance but for the profession to guide the bureaucrats.

Apart from the general objection contained in the previous paragraph, the call for regulators to direct scoping, so that it meets their decision-making needs, undermines both the professionalism of the consultant and opportunity for mutual adjustment among stakeholders. This proposal ignores the political and social dimensions of the process: scoping is not simply about gathering information.

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More generally, an increase in regulations that dictate what should or should not be included in an EIS leads to the content of the EIS being stressed more than its quality. This is because quantity and content are easy to regulate but quality is more elusive and more closely allied to professional ethics and competence than to codification.

The proposal that regulators issue more guidance documents is another suggestion that might be common sense in Australia, Canada and the UK, but unlikely to be so in developing countries. In the latter, such documents are the product of either experienced consultants (sometimes national, frequently international) commissioned to write the guidelines, or are adaptations of the safeguard policies of international financial institutions.

I suggest that the proposal should be that a country's most experienced and ethical environmental impact assessment professionals develop the proposed, and needed, guidelines, not that guidance documents be produced by government regulators. Similarly, the call for greater care and clarity in the use of 'significance' in environmental impact assessment is sensible, but it is not common sense that this should be entrusted to bureaucrats.

The final proposal made by Ross *et al* is to improve the quality of EISs through government regulators rejecting poor quality EISs and rewarding good ones. This presupposes that the government regulators can tell the difference. Again this might well be the case, and common sense, in developed countries in which government regulators are senior, experienced and ethical professionals. However, in countries where inexperienced young professionals undertake the review of environmental impact assessments, the proposal does not make sense, common or not.

What is common sense is that poor EISs must be rejected! However, in developing countries without a cadre of senior experienced EIA government regulators, this could be better achieved through insistence that all EIAs automatically be subject to review by a member of a panel of experienced, ethical EIA professionals, appointed by the profession. The "cumulative laxity of the profession" that Ross *et al* allude to might better be rectified by the quality of EISs being assured through review by respected professional peers than through review by government bureaucrats.

Conclusion

All the learned professions with which I am familiar deem it to be common sense that their members have appropriate theoretical training and they regulate their own professional affairs. I believe it is common sense that environmental impact assessment professionals should also have a common body of theoretical knowledge and should also try harder to control the quality of their professional outputs. I do not believe it is common sense for environmental impact assessment professionals to expect government regulators to intervene more in their profession, especially not in developing countries where the regulatory arm of the profession is its weak link.

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On common sense and other virtues in environmental impact assessment

Barry Sadler

> Nothing so needs reforming as other people's habits
>
> Mark Twain, *Pudd'nhead Wilson*

Environmental impact assessment (EIA) practitioners, slumbering in their complacency, now number among those who need to mend their ways according to Ross *et al*. The authors' jaunty prescription is for a "good dose of common sense" in carrying out three core steps in the EIA process. It may be, to paraphrase another Twain aphorism, that the reported dearth of common sense has been greatly exaggerated (possibly for effect). However, literary allusion aside, that is the pith of this analysis-cum-polemic, in which the authors list ten types of environmental impact statement (EIS) they never

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wish to see again. This is Exhibit A of the evidence in their case against the failure of EIA practitioners to apply common sense.

At first glance, this startling indictment seems highly likely to get EIA practitioners to sit up, take notice and respond (a stated aim of the paper). Whether it also provokes them to take action to improve the quality and integrity of their work (as also intended) is quite another matter. Much will depend on the credence that practitioners give to the arguments of the authors and to their suggestions for injecting common sense back into the areas of EIA from which they have been reported missing. In that regard, the first test is to subject the analysis to critical scrutiny to see if it stands up to challenge and makes a significant contribution to the debate on EIA practice (for instance, by providing new insights on key problems and how to address them).

Taking stock of the pros and cons

For my part, I find it difficult to come to an unequivocal determination of the value added by this critique. On the up side, the intent is spirited and admirable (to shake practitioners out of their complacency), the analysis is direct and to the point (EIA is not rocket science, avoid over-complication); and the conclusion is singular (the failure to apply common sense amounts to a "laxity in our professionalism"). Moreover, the three authors are respected 'names' in the field, with strong credentials and considerable experience in the matters discussed.

On the down side, their analysis arguably covers mostly old ground, adds little that is really new or different (other than a witty tabulation of problem EISs) and then makes the sweeping claim that much of the blame for inadequacies of EIA practice are down to an absence of common sense (a culprit not previously under the spotlight). The case made by the authors may not be without foundation or merit but it may strike many as overly simplistic or in need of further substantiation and reconciliation with other perspectives on EIA practice.

Diagnosis of key deficiencies

Much of the analysis of the deficiencies of EIA practice is sober and straightforward. It follows a well-trodden path in focusing on the three core elements or stages of the EIA process, which, individually and collectively, help guarantee integrity of approach and assure the quality of the EIS and other documents and inputs. Scoping, evaluation of significance and quality review were three of the four priority areas reviewed in an international study of EA effectiveness (Sadler, 1996).

The concerns raised then as now are much longer standing and date back to the early years of NEPA (National Environmental Policy Act) and all that followed. In the interim, neither the nature of these problems, nor, tellingly, their solutions seem to have changed much (as example, see Council on Environmental Quality, 1976a; 1976b). At least by diagnosing them as a deficiency of common sense, Ross *et al* challenge the conventional wisdom of the field (but find themselves in the company of many EIA detractors who have said much the same thing).

Outing malpractice

Unquestionably, far too much EIA practice is characterized by substandard and shoddy work, as reflected in the EIS. The authors (tongue in cheek) offer a typology of poor quality work that they claim to encounter on a *daily basis* (emphasis added). It is an exposition of the hapless, the inept and the incompetent, a catalogue of EIA practice at its worst. As such, it is not (I hope) meant to be taken as representative, merely as representational of features of EIA work that are unacceptable (and which may occur on a wider scale than many would prefer).

Some might find the caricatures of malfeasance overdrawn or even outrageous and few practitioners can be expected to admit to ownership of an EIS that resembles one on the Ross *et al* blacklist. Yet humor, when used sympathetically, aids reflection on a shared reality or common predicament and I have no doubt that is what the authors intended. Like any stereotype, of course, this one depicts only part of the story of EIA practice, which can be viewed through a wider lens of success and failure (Sadler, 2004). Offsetting trends and developments are only briefly mentioned by the authors but they are well known to them and can be taken as read in this journal.

Prescribed remedies

In the above version, the EIA process is scuppered by its own practitioners who far too often fail to pass even the most elementary test — that of exercising common sense. No wonder Ross *et al* advocate a zero-tolerance approach to mediocrity in EIA practice; if their diagnosis is right, it becomes nothing more than an empty charade of practitioners going through the motions and understating the impact of projects on the environment.

Even those who doubt the argument might buy into the remedies that are prescribed. They bring together a familiar agenda of policy and regulatory measures for improving scoping, better determining significance, and so on (and, surprisingly, rely heavily on government intervention to redress lack of common sense). Many similar calls have been made before and it is unlikely that the response will be different this time (although there is nothing wrong and much right with putting this back on the radar screen of EIA practitioners).

Cultivating other virtues

In the final analysis, common sense is the lowest common denominator of EIA virtues, necessary

but perhaps not sufficient to achieve quality of work and integrity of approach. To that end, or to aspire to excellence, EIA practitioners need to cultivate other, more positive virtues. Five core values, inspired by the ideas of Roger Grudin (1990), might be:

- Wisdom — which comes from the accumulation of experience within a framework of EIA knowledge and understanding;
- Creativity — the ability to produce new ideas and insights to address established or emerging challenges;
- Innovation — the application of wisdom and creativity to make positive changes that resolve problems;
- Courage — the mental or moral strength to remain true to our principles and ethics in the face of adversity and pressure to do the opposite; and
- Humility — to acknowledge the inherent limitations of EIA work (such as prediction in the face of uncertainty) and to avoid non-discovery (the recycling of conventional wisdom is endemic in the literature and, yes, I plead guilty also).

In conclusion

The authors have taken direct aim at ten debased currencies of EIA malpractice and provided a provocative characterization of poor quality work (nobody can accuse them of being afraid to court controversy). If nothing else, they remind us that many assessments fall far short of meeting the gold standard of good practice and have only nodding acquaintance with the concepts and methodologies normally on offer in these pages. Despite the above reservations, I concede them the benefit of the doubt on their claim that "most of the problems" can be solved simply through a common-sense approach.

Obviously that will help, but it is not clear to me how this change is to happen. The authors' repetition of standard bromides is not convincing and there is little discussion of other actions. Otherwise, I found their broadside at mediocrity to be provocative as advertised, slightly unnerving (as their gunsights turn to riposte), sometimes intemperate (surely not every EIS lies) and invigorating in its critical use of humor (hitherto only an infrequent and accidental visitor to these pages).

A last word

The authors also cite Anon (popular elsewhere but a stranger in the Manchester school of EIA). Perhaps the last word should come from the same canon:

> To make a reputation when other ways are barred
> You take something very simple and make it very hard
>
> Happily now that EIA is here to stay
> We can measure quality in fees per day
>
> And when common sense is in short supply
> Remember words per page is what you buy

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Riposte: a common-sense approach to the use of common sense in EIA

William A Ross, Angus Morrison-Saunders and Ross Marshall

Our 'common sense' article, which started life as 'the rant' during the IAIA'04 conference, was an attempt to provoke discussion on how improvements could be made in three key areas of professional practice in impact assessment. The five responses indicate some success. All five contributors have

identified problems in practice and have suggested means of improving performance in the three areas, even if these are not always what we expected. At risk of rapidly forming a second generation to Wood and Sadler's 'grumpy old men' of EIA (IAIA'05 Conference), we would like to further explore our ranting themes[1] in light of the comments received.

First, though, some comment on the nature of common sense itself (or at least what we mean by it!) is warranted. Individuals have their own internalized notion of what is common sense to them, as most of our respondents pointed out. We accept this and do not profess that some single simple sense of common sense should magically apply across all stakeholders in EIA. This is patently absurd. However, a dictionary definition runs along the lines of "sound, practical perception or understanding".

Thus to apply a common-sense approach to EIA implies that consistent methods that are internally robust be used. To this, we would add that EIA should remain pragmatic, objective and transparent, with hysteria, angst and pseudo-scientific complexity kept to a minimum! We briefly revisit our three key concerns again from this perspective and in the light of the previous five responses.

Joe Weston, Elvis Au and Richard Morgan all point out the subjective and value-laden nature of EIA activities (especially determination of significance and hence, by default, scoping) and Luis Sánchez notes how "environmental conflicts can easily become emotional issues". It is unrealistic to expect consensus across public, proponent and regulator participants in EIA, but this does not mean that a post-modernist 'anything goes' approach should prevail.

Richard Morgan suggests we have too little respect for public input into scoping, a claim we emphatically reject. Public participation is one of the cornerstones of EIA, but there is a world of difference between scoping for information relevant to development, and scoping for public opinions relating to the scheme.

Joe Weston points out some of the difficulties in using common sense and of including societal values in project decision-making. We believe he makes the case well but a little too forcefully. If his ideas were followed too literally, the public interest test for development projects (the widely applied rule that a proposed project should be approved only if it is in the public interest) would be rejected as arbitrary and capricious. EIA would be replaced by the postal ballot.

We stand by our previous call to rein in the boundaries during scoping to focus on what matters inherently for decision-making. While the proponent can play an important role here, notwithstanding the tendency noted by Joe Weston for proponents to operate in fear of potential legal challenge and thereby include 'everything and nothing' in an EIS (a situation that is counter to their purpose of seeking fast and efficient development approval), regulators need to take a firm stand on this point.

Richard Fuggle observes, all too correctly, that EIA practice in developing countries is very different from that often practiced in developed countries and, correspondingly, different common-sense ways of overcoming barriers are needed in these countries. Most importantly, he observes that government regulators lack the expertise to judge EIAs and hence to improve EIA practice. We agree and believe that the first necessary practice in developing countries is to build in-house capacity for EIA regulators in a manner that meets the cultural decision-making of that country or society. In the meantime, Richard Fuggle suggests some alternative strategies that can help.

It is interesting to note that EIA in Hong Kong, through a concerted drive by its regulators, came from 'not-on-the-map' in 1990 to world prominence less than a decade later. Where there is a political appetite for environmental improvement, setting your own benchmark for EIA performance appropriate to the scale, nature and forms of development of concern is a practical option for those frustrated by poorly implemented EIA practices. Waiting for proponents to improve through some Darwinian form of selection will ultimately prove disappointing! We note that Elvis Au points out the critical importance of making continuous improvements in EIA, a practice that led to the changes seen in Hong Kong.

Clearly, the determination of significance is a relativistic values-based activity, but our chief bugbear with this central tenet of EIA concerns inconsistent explanation of the concept when used in EISs. We support Richard Morgan's calls for methodological approaches to EIA. Common sense says that the basis for determining significance in a given EIA needs to be noted (for instance, Table 1 in our original paper) but then must be subsequently followed throughout the EIS! This would overcome the difficulties that Elvis Au noted for "lay decision-makers and lay persons to understand the issues" presented in EIA documents. If we cannot achieve this simple goal, we have failed as both professionals and as a global profession.

Treating scoping and significance with a good deal of common sense would automatically lead to better quality (and appropriate sized) EISs and would avoid the practice noted by Luis Sánchez that it is "better to treat many topics with equal superficiality than to study in depth a few significant issues". Yet Sanchez also observes the existence of good EIA standards of practice that need to be more widely adopted, thus suggesting that the tools for improvement are there but are rarely sought out and applied by some practitioners. Common sense constantly urges us not to 'reinvent the wheel' or to argue over what colour it should be: we know how to do good EIA, we just need to do it!

As the saying goes, 'many a true word is spoken

in jest'. While we spoke in jest at IAIA'04 with our ranting tongues very firmly in our cheeks, our paper points out the need for significant improvements in EIA practice if we are to be taken seriously by clients, the public and governments. Our rant should be taken seriously; let us all apply more common sense in EIA.

Notes

1. Much as we would like to take up Luis Sanchez' implied invitation to discuss the fourth area of EIA deficiency; follow-up, alas, space limitations thwart us here but we could direct him to a very good book on the subject! [Angus Morrison-Saunders and Jos Arts, eds. 2004. *Assessing Impact: Handbook of EIA and SEA Follow-up*. London, Earthscan, 2004. ISBN 1-84407-139-1].